

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 12, 14, and 16 are pending in this application. Claim 14 stands withdrawn from consideration. Claims 12 and 16 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. patent 6,947,401 to El-Malki et al. (herein "El-Malki") in view of U.S. patent 7,027,432 to Carolan et al. (herein "Carolan"). That rejection is traversed by the present response as discussed next.

Each of independent claims 12 and 16 is amended by the present response to clarify features recited therein. Those claims particularly clarify the use of a transfer device or mobile communication method in a mobile communication system including a first access network provided by a first communications carrier and a second access network provided by a second communications carrier, the transfer device arranged by the first communication carrier. The claimed amendments clarify one objective in the claimed inventions is that mobile terminals that join in a mobility management service provided by their own communications carrier can use a mobility management service even if the mobile stations use a connection management service provided by another communications carrier due to traveling, so that it becomes possible to sufficiently acquire users (subscribers) of the mobility management service.¹

To achieve such an objective, the claim 1 now clarifies a determination unit can determine:

...whether information concerning the mobile terminal included in the packet received by the communication unit coincides with the terminal information stored in the terminal information storage unit, and thereby to determine whether or not to transfer the packets received by the communications unit to the mobile terminal connected to the access router arranged by the second communications carrier in the second access network.

¹ Specification for example at page 2, lines 12-20 and page 51, lines 21-34.

Independent claim 16 recites a similar features. That is, as noted in the present specification at page 28, line 29 to page 9, line 31 and page 18, line 21 to page 19, line 12, a transfer device arranged by a first communications carrier determines whether or not to transfer a packet to a mobile terminal connected to an access router arranged by a second communications carrier, based on user (subscriber) information of the mobile terminal stored by the first communication carrier.

The claims as written are believed to positively recite features neither taught nor suggested by the applied art.

Independent claims 12 and 16 as currently written are directed to a transfer device and mobile communication method that include the following features.

A mobile communication system includes a first access network provided by a first communications carrier, a second access network provided by a second communications carrier, and a transfer device arranged by the first communications carrier. (Specification for example at page 8, line 29 to page 9, line 31).

The transfer device arranged by the first communication carrier operates to receive, at the transfer device, packets to a mobile terminal connected to an access router arranged by the second communications carrier in a second access network, stores terminal information unique to the mobile terminal allowed to use the transfer packet, and determines whether the packet received by the communication unit is a packet from a mobile terminal allowed to use packet transfer performed by the transfer device based on whether information concerning the mobile terminal included in the received packet coincides with the stored terminal information, and thereby determines whether or not to transfer the packets received by the communications unit to the mobile terminal connected to the access router arranged by the second communications carrier and the second access network. (Specification for example at page 8, line 29 to page 9, line 31, and page 18, line 21 to page 19, line 12).

As recognized in the Office Action El-Malki discloses a mobility anchor point (MAP) 375 (noted as a transfer device) in a communications system including a plurality of access routers 310 (noted as connection management devices) connected to a mobile node 305, which transmits packets to the mobile node 305 via the access router 310. In El-Malki the mobility anchor point 375 receives a binding update (packet) through the access router 310 connected to the mobile node (column 10, lines 21-24, Figures 3 and 9, step S905). The mobility anchor point 375 determines whether the local network policies allow the mobility anchor point to access the registration of the binding update (column 10, lines 21-44, Figures 3 and 9, step S910). Further, the mobility anchor point 375 transfers the packets to the mobile node, based on the result of the mobility anchor point 375 receiving the binding update (column 10, lines 21-44, Figure 9, step S955).

Applicants submit El-Malki differs from the claims as written as El-Malki does not disclose or suggest transfer device or operation “in a mobile communications system including a first access network provided by a first communications carrier and a second access network provided by a second communications carrier”, and further El-Malki does not disclose or suggest specifics of the “determination unit” or operation in such a device. That is, El-Malki merely discloses management methods in which an access management service and a mobility management service are provided by a single communications carrier, and El-Malki is not at all directed to management methods in which two connection management services are provided by respective first and second communications carriers, and the mobility management services provided by the first communication carrier only.

Moreover, applicants respectfully submit no disclosures in Carolan cure the deficiencies in El-Malki.

Carolan is directed to a connection method of a network access device 101 connected to one of service networks, provided by a first service provider or a second service provider,

through a router 130. Carolan discloses the router 130 (noted as a transfer device) stores a list of addresses allocated to subscribers of a first service provider. The router 130 similarly stores the list of addresses allocated to subscribers of the second service provider (column 4, lines 51-65). In Carolan the router 130 makes a determination based on whether a source address of received packets routed from a network access device 101 coincides with the address stored in the list 2d, and thereby determines whether or not to transfer received packets to the service network provided by the first service provider. Similarly, the router 130 determines whether or not to transfer the received packets to the service network provided by the second provider (column 4, lines 31-65).

Thereby, Carolan discloses the router 130 determines which service provider is available to the network access device 101 that is connected to the router 130.

However, Carolan is similarly deficient as in El-Malki as Carolan does not provide a mobility management service to mobile terminals using a connection management service provided by a second communications carrier, which is different from a first communications carrier, for example due to traveling, if the mobile terminals join in the mobility management service provided by the first communications carrier, so that it becomes possible to sufficiently acquires users (subscribers) of the mobility management service.

Thereby, applicants submit Carolan also does not disclose or suggest the features recited in amended independent claims 12 and 16, and particularly does not disclose or suggest a transfer device arranged by the first communications carrier that determines whether or not to transfer packets to the mobile terminal connected to the access router arranged by the second communications carrier, based on user information of the mobile terminal stored by the first communications carrier, i.e., whether the transfer device arranged by the first communications carrier stores the terminal information of the mobility terminal.


Thereby, Carolan cannot cure the deficiencies in El-Malki with respect to the claims as currently written.

In view of the foregoing comments, applicants respectfully submit the claims as currently written positively recite features neither taught nor suggested by El-Malki in view of Carolan, and thus the claims as written are believed to be allowable over that grounds for rejection.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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